

What is claimed is:

1. A plate changing apparatus comprising:
2 a loader supported by a frame to be movable
3 substantially parallel to a sheet convey direction and
4 serving to feed a new plate to a plate cylinder;
5 loader moving means for moving said loader
6 from a retreat position to a wait position close to the
7 plate cylinder during plate changing; and
8 a plate removal unit fixed to the frame to
9 recover an old plate discharged from the plate cylinder.

2. An apparatus according to claim 1, wherein
2 said loader comprises a guide for guiding the old plate
3 removed from the plate cylinder to said plate removal
4 unit.

3. An apparatus according to claim 1, wherein
2 said loader comprises extracting means for extracting
3 the old plate from the plate cylinder.

4. An apparatus according to claim 1, further
2 comprising:
3 a base for swingably supporting said loader
4 between the substantially vertical wait position and an
5 inclined plate feed position and movable parallel to the
6 sheet convey direction; and

7 driving means for driving said loader from the
8 wait position to the plate feed position during plate
9 changing, to move a distal end of said loader that holds
10 a new plate to be close to the plate cylinder.

5. An apparatus according to claim 4, wherein
2 said loader comprises
3 extracting means for extracting the old plate
4 from the plate cylinder when said loader is located at
5 the plate feed position, and
6 a guide for guiding the old plate, extracted
7 from the plate cylinder by said extracting means, to
8 said plate removal unit through said loader.

6. An apparatus according to claim 4, wherein
2 said loader comprises a switching guide member
3 for switching a plate removal path for the old plate and
4 a plate feed path for the new plate when said loader is
5 located at the plate feed position, and
6 said switching guide member guides the old
7 plate, removed from the plate cylinder during plate
8 removal, to said plate removal unit through the plate
9 removal path.

7. An apparatus according to claim 1, wherein
2 said plate removal unit removes the old plate removed
3 from the plate cylinder through said loader.

8. An apparatus according to claim 1, wherein
2 said plate removal unit comprises
3 a hook which is supported to be movable
4 forward and backward into and from a plate removal path
5 for the old plate, temporarily retreats from the plate
6 removal path by a bent portion of one end of the old
7 plate discharged into the plate removal path, and moves
8 forward into the plate removal path by a weight thereof,
9 and
10 hook moving means for moving said hook upward.

9. An apparatus according to claim 1, wherein
2 said plate removal unit comprises
3 a hook which is supported to be movable
4 forward and backward into and from a plate removal path
5 for the old plate, and engageable with a bent portion of
6 one end of the old plate,
7 a biasing member for biasing said hook in a
8 direction to move forward into the plate removal path,
9 a prohibiting member for prohibiting forward
10 movement of said hook into the plate removal path
11 against a biasing force of said biasing member, and
12 hook moving means for moving said hook in a
13 plate removal direction.

10. An apparatus according to claim 1, wherein

2 said plate removal unit comprises a removed plate guide
3 board which guides and removes the old plate, removed
4 from the plate cylinder, substantially perpendicularly
5 along a front surface of a printing unit.